Exhibit 5
Part 21
To Third Declaration of
Joseph N. Hosteny

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primary memory for collecting transaction data and at least one secondary memory for backup storage of the transaction data.	"The storage device 48 may be a rewritable mass storage device which can at least temporarily store or archive compressed or uncompressed check images prior to transmission to their destinations." Campbell, et al., Col. 6, lns 57-60. "In addition to temporary storage of check images, the storage mechanism 48 may be configured to provide long term archiving of check images." Campbell, et al., Col. 7, lns 6-8.
21. A system as in claim 20 wherein said at least one secondary memory comprises at least one DLT jukebox.	ANSI in view of Campbell, et al. (5,373,550) and Minoli DLT = Digital Linear Tape, a type of magnetic tape storage device. Minoli describes several image storage systems including: CD-ROMs, WORMs, recordable CD, and magnetooptic (MO) storage. Minoli, p. 219
22. A system as in claim 18 wherein said at least one communication network comprises:	ANSI in view of Minoli
at least one first local area network for transmitting data within a corresponding one of said one or more remote data access subsystems;	Scan Segment on a LAN (Minoli, p. 31; 269-270) ANSI, p. 196; 202-203 illustrate that a financial institution may have multiple subsystems, such as a FII system user and a FII translator. Such subsystems may be connected by a LAN.
at least one second local area network for transmitting data within a corresponding one of said at least one data collection subsystem;	Utilities Segment on a LAN (Minoli, p. 31; 269-270) "[T]he communications of an interchange is an end-to-end service which may involve the use of intermediate relay points. Intermediate FII-translators forward received transaction sets destined to other users by embedding them in a newly constructed interchange." ANSI, p. 199. Financial institutions and intermediaries may interchange images. ANSI, p. 2.
at least one third local area network for transmitting data within a corresponding one of said at least one data processing subsystem; and	Access Segment on a LAN (Minoli, p. 31; 269-270). ANSI, p. 196; 202-203 illustrate that a financial institution may have multiple subsystems, such as a FII system user and a FII translator. Such subsystems may be connected by a LAN.
at least one wide area network for transmitting data between said one or more remote data access subsystems, said at least one data collection subsystem and said at least one data processing subsystem.	WAN connectivity for associated imaging and processing LANs through a Public PVC or SVC frame relay network. (Minoli, Pages 269-270). Examples of communication methods include "teleprocessing methods: links, network end point addresses, speed, data transfer protocols, etc." ANSI, p. 172; 199. These are examples of WANs.

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23. A system as in claim 22 wherein said at least one communication network further comprises:	ANSI in view of Minoli
at least one first modem for connecting said at least one first local area network of said one or more data access subsystems to a corresponding one of said at least one second local area network through said at least one wide area network;	Dial-up link between LAN routers. This approach involves the use of modems connected to the LAN server (bridge or router), to utilize the analog public telephone network. Circuit switching implies that the communications channel is not dedicated 24 h per day, but must be brought on line when needed (via a process called call setup) and then taken down when no longer needed. Minoli, p. 263.
at least one bank of modems for connecting said at least one second local area network of said at least one data collection subsystem to a corresponding some of said at least one first local area network of said one or more data access subsystems through said at least one wide area network;	Dial-up link between LAN routers. This approach involves the use of modems connected to the LAN server (bridge or router), to utilize the analog public telephone network. Circuit switching implies that the communications channel is not dedicated 24 h per day, but must be brought on line when needed (via a process called call setup) and then taken down when no longer needed. Minoli, p. 263.
at least one first wide area network router for connecting a corresponding one of said at least one second local area network of said at least one data collecting subsystem to said at least one wide area network; and	Minoli Fig. 9.7 (p. 269) First router connecting two or more LANs over a WAN. Examples of communication methods include "teleprocessing methods: links, network end point addresses, speed, data transfer protocols, etc." ANSI, p. 172; 199.
at least one second wide area network router for connecting a corresponding one of said at least one third local area network of said at least one data processing subsystem to said at least one wide area network.	Minoli Fig. 9.7 (p. 269) Second router connecting two or more LANs over a WAN. Examples of communication methods include "teleprocessing methods: links, network end point addresses, speed, data transfer protocols, etc." ANSI, p. 172; 199.
24. A system as in claim 23 wherein said at least one first wide area network and said at least one second wide area network comprises a carrier cloud, said carrier cloud using a frame relay method for transmitting the transaction data.	ANSI in view of Minoli "Frame relay service provides interconnection among n sites by requiring only that each site be connected to the 'network cloud' via an access line. ... The cloud consists of switching nodes interconnected by trunks used to carry traffic aggregated from many users (see Fig. 9.7). In a public frame relay network the switches and the trunks are put in place by a carrier for use by many

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	corporations. ... In a private frame relay network, the switches and trunks are put in place (typically) by the corporate communications department of the company in question." Minoli, p. 268. Examples of communication methods include "teleprocessing methods: links, network end point addresses, speed, data transfer protocols, etc." ANSI, p. 172; 202.
25. A system as in claim 22 wherein said at least one second local area network and said at least one third local area network further comprises a corresponding one of at least one network switch for routing transaction data within said at least one second local area network and said at least one third local area network.	ANSI in view of Minoli "Frame relay service provides interconnection among n sites by requiring only that each site be connected to the 'network cloud' via an access line. ... The cloud consists of switching nodes interconnected by trunks used to carry traffic aggregated from many users (see Fig. 9.7). In a public frame relay network the switches and the trunks are put in place by a carrier for use by many corporations. ... In a private frame relay network, the switches and trunks are put in place (typically) by the corporate communications department of the company in question." Minoli, p. 268. Examples of communication methods include "teleprocessing methods: links, network end point addresses, speed, data transfer protocols, etc." ANSI, p. 172; 199.
26. A method for central management, storage and verification of remotely captured paper transactions from checks comprising the steps of:	The ANSI X9.46 standard is an electronic data interchange protocol for the exchange of electronic digitized images of financial documents among different financial institutions involved in a payment transaction. ANSI, p. 1. The exchange occurs across diverse computing platforms. Packaged interchange content may be delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the data electronically. ANSI, p. 15-16. "This standard is intended to improve the payments system by supporting the interchange of digitized images of financial documents, specifically check and similar paper-based instruments; facilitate the truncation of the paper at the earliest possible point in the clearing process; and support transmissions from a single transaction to many transaction serving banking payment processing applications." ANSI, p. 1.
26a. capturing an image of the paper transaction data	"The institution participating in check image interchange shall capture both the full front and the full back of the item. ANSI, p. 9.
at one or more remote locations said transaction data including a payer bank's identification number, a payer bank's routing number, a payer bank's routing information, a payer's account number, a payer's check, a payer bank's draft, a check amount, a payee	The ANSI X9.46 standard is an electronic data interchange protocol for the exchange of electronic digitized images of financial documents among different financial institutions involved in a payment transaction. ANSI, p. 1. (See chart of corresponding elements in claim 1 above.)

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bank's identification number, a payee bank's routing information, and a payee's account number; and sending a captured image of the paper transaction data;	
sending a captured image of the paper transaction data;	Transaction sets are interchanged. Transaction set contents are different for each functional group that can be interchanged. ANSI, p. 16. The function groups include "item views". ANSI, p. 14. "Item Views" include "bundles of views of imaged items, item information for each view and item view data." ANSI, p. 16. "For each item, e.g., check, this standard defines mechanisms for sending and receiving both information about the item (item information) and digitized representations of the item." ANSI, p. 9.
26b. managing the capturing and sending of the transaction data;	"The data to be interchange from the originating imaging application are packaged by the FII-translator." ANSI, p. 10. "The translator (FII-translator) function of the originating application produces an interchange object (i.e., a complex data structure) by translating the output of the local imaging handling, data processing, or data storage application into a standardized interchangeable 'edi' structure." ANSI, p. 12; 150-151.
26c. collecting, processing, sending and	"The data to be interchanged from the originating imaging application are packaged by the FII-translator, and sent to the receiving imaging application." ANSI, p. 12. "[U]pon receipt of the interchanged data, the FII-translator will parse the incoming data for the receiving imaging application. Then, the receiving imaging application may generate acknowledgements or replies to query requests, and become the originating imaging application for a new image interchange." ANSI, p. 12.
storing the transaction data at a central location;	On p. 14, lines 465-466, of the standard states that the "edi" translator function of the receiving application translates the "edi" interchange into the locally understood data structures for subsequent storage or processing of the data by the receiver's application." The ANSI X9.46 standard is an electronic data interchange protocol for the exchange of electronic digitized images of financial documents among different financial institutions involved in a payment transaction. ANSI, p. 1.
26d. managing the collecting, processing, sending and storing of the transaction data;	"[U]pon receipt of the interchanged data, the FII-translator will parse the incoming data for the receiving imaging application. Then, the receiving imaging application may generate acknowledgements or replies to query requests, and become the originating imaging application for a new image interchange." ANSI, p. 12.
26e. encrypting subsystem identification information and	The ANSI describes encryption and various security methods. ANSI, p. 55-61. Encryption of specific data elements is taught, "[e]ncryption key name... conveys the name of the key used to encipher the

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the transaction data; and	contents of this functional group. The name is mutually known to the security originator and the security recipient, is unique for this relationship, and allows a particular key to be specified." ANSI, p. 56. Thus, data elements are encrypted (enciphered) at the functional group level. This is further supported by the initialization vector showing the length of the data element to be encrypted. ANSI, p. 55; 57. As explained, one (1) type of functional group is known as "item views." The check images are item views. The "creation computer" which identifies the computer that creates the image is also an item view data element. ANSI, p. 93-94; 105 Thus, the originating institution (remote subsystem) provides encryption to both the images and the subsystem identification information.
26f. transmitting the transaction data and the subsystem identification information	Transaction sets are interchanged. Transaction set contents are different for each functional group that can be interchanged. ANSI, p. 14. The function groups include "item views". ANSI, p. 14. "Item Views" include "bundles of views of imaged items, item information for each view and item view data." ANSI, p. 14. "For each item, e.g., check, this standard defines mechanisms for sending and receiving both information about the item (item information) and digitized representations of the item." ANSI, p. 9.
within and	"[P]ackaged interchange content is delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the packaged interchange data electronically." ANSI, p. 15; 199.
between the remote location(s) and the central location(s) and the central location.	Items are transmitted from the "Image and Data Processing Application" to the "Originating FII translator" within the originating financial institution. ANSI, p. 202 (FIG. F.1). Items are transmitted from the "Receiving FII translator" to the "Image and Data Processing Application" within the receiving financial institution. ANSI, p. 203 (FIG. F.2). "[P]ackaged interchange content is delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the packaged interchange data electronically." ANSI, p. 15; 199.
27. The method as in claim 26 wherein said managing the capturing and sending step comprises the steps of:	ANSI
successively transforming the captured transaction data to a bitmap image, a compressed bitmap image, an encrypted,	Items (images) may be compressed, encrypted and tagged with an image key for transmission. "Compression of views of items included in an interchange shall use one or more of the following algorithms." ANSI, p. 9; 88; 162-163. "Each pixel of uncompressed image shall be encoded as

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compressed bitmap image and an encrypted, compressed bitmap image tagged with information identifying a location and time of the transaction data capturing; and	standard binary numbers." ANSI, p. 160. Encryption keys encipher the contents of the functional group. ANSI, p. 57. The function groups include "item views". ANSI, p. 14. An image key is another type of item view that may be transmitted. ANSI, p. 88. The "image key data element contains a unique value which is assigned to the image to provide a cross-reference between the financial data and the images and associated image data. This value is unique within the ECE institution." The image key contains a date, a sequence number, and a cycle number. ANSI, p. 90.
storing the tagged, encrypted, compressed bitmap image.	The standard "defines a query protocol that may be used to request specific imaged items, or to request groups of imaged items being held in another institution's image storage facility." ANSI, p. 1. Several storage scenarios are detailed in the ANSI, both at paying and presenting banks. ANSI, p. 173. Storage may be by the imaging bank in the manner that it is captured or in the manner that images are ultimately transmitted. ANSI, p. 173.
28. The method as in claim 27 wherein said managing the capturing and sending step also captures electronic transactions from credit cards, smart cards and debit cards, signature data or biometric data, further comprising the steps of:	ANSI in view of prior art admission Applicants' admission
initiating an electronic transaction;	Applicants' admission
capturing signature data;	Applicants' admission
capturing biometric data; and	Applicants' admission
printing a paper transaction with data glyphs for the initiated electronic transaction.	Applicants' admission
29. A method as in claim 26 wherein:	ANSI
said capturing and sending step occurs at a plurality of remote locations; and	The ANSI X9.46 standard is an electronic data interchange protocol for the exchange of electronic digitized images of financial documents among different financial institutions involved in a payment transaction. ANSI, p. 1. "Image interchange will occur among a wide variety of financial institutions" ANSI, p. 2.
said collecting, processing, sending and storing step occurs at a plurality of central locations.	The ANSI X9.46 standard is an electronic data interchange protocol for the exchange of electronic digitized images of financial documents among different financial institutions involved in a payment

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	transaction. ANSI, p. 1. "Image interchange will occur among a wide variety of financial institutions" ANSI, p. 2.
30. A method as in claim 29 wherein said collecting, processing, sending and storing step comprises the steps of:	ANSI in view of Owens, et al. (4,264,808) and Minoli
polling the remote locations for transaction data with servers at the central locations;	As the 'images' of the documents 18 included in a transaction group or batch are received in the form of entry records 74 (FIG. 3B) by the communication means 88, they are routed to the image file means 100 via a system bus 102 which may be any conventional high-speed bit serial bus." Owens, et al., Col. 12, lns 12-16. Minoli describes several servers suitable in imaging applications. Minoli, p. 33; 250.
storing the transaction data at the central location in a memory hierarchy, said storing maintains recently accessed transaction data in a primary memory and other transaction data in a secondary memory; and	At the central processing center, "[t]he image file means 100 is processor controlled and broadly includes a primary storage 104 which represents, for example, a plurality of high-capacity magnetic discs and a back-up storage or archival file system, shown, for example, as a video disc 106." Owens, et al., Col. 12, lns 23-27.
dynamically assigning the servers at the central location to receive portions of the transaction data for balancing the transaction data among the servers; and	"The communications controllers 232, 234, and 236 (FIG. 5A) act as buffers in controlling the flow of the entry records 74 to the communications nodes 246, 248 which also include memory to store portions of an entry record 74. Conventional direct link adapters 252 are used to couple the communication nodes 246, 248 to the system bus 102. When all the portions of an entry record 74 are received at one of the communication nodes 246, 248 all of these portions of an entry record are then routed to the image file means 100 (FIG. 1) under the control of an image file processor 254 (FIG. 5B) which is included in the image file means 100. When all the entry records 74 for a transaction group are received at the image file means 100, an end of documents 18 signal from the input hopper 24 shown in FIG. 3A indicates this fact to the system manager 108." Owens, Col. 21, lns 1-17. "Bridges connect two or more LANs at the MAC layer. A bridge receiving packets (frames of information will pass the packets to the interconnected LAN based on some forwarding algorithm selected by the manufacturer (explicit route, dynamic address filtering, static address filtering, etc.) Minoli, p. 248-49.
generating reports from the transaction data and providing data to software applications.	At the central processing center, "[t]he data associated with a transaction group of documents 18 is extracted from the data file means 114, and is put in the appropriate format by a conventional interface 124. From the interface 124, the data associated with the "on-us" documents 18 is presented in the desired format to the conventional application systems 126 where reports and application posting are performed." Owens, et al., Col. 14, lns 12-18.

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31. A method as in claim 30 wherein said storing the transaction data step comprises the steps of:	ANSI in view of Owens, et al. (4,264,808) and Minoli
partitioning the stored transaction data with predefined templates into panels; and	At the central processing center, "[t]he data associated with a transaction group of documents 18 is extracted from the data file means 114, and is put in the appropriate format by a conventional interface 124. Owens, et al., Col. 14, lns 12-18. MPR (machine pattern recognition) units connected to processors at the IPC (FIG. 5C) "include[] a conventional character recognition reader which reads the decompressed image of a document 18 and ascertains the monetary amount thereon." Owens, et al., Col. 23, lns 44-47.
identifying locations of the panels.	At the central processing center, "[t]he data associated with a transaction group of documents 18 is extracted from the data file means 114, and is put in the appropriate format by a conventional interface 124. Owens, et al., Col. 14, lns 12-18. MPR (machine pattern recognition) units connected to processors at the IPC (FIG. 5C) "include[] a conventional character recognition reader which reads the decompressed image of a document 18 and ascertains the monetary amount thereon." Owens, et al., Col. 23, lns 44-47.
32. A method as in claim 31 wherein said managing the collecting, processing, sending and storing of the transaction data step comprises correcting errors in the panels of stored transaction data.	ANSI in view of Owens, et al. (4,264,808) and Minoli "After completion at the MPR unit 140, all the developed data for a document 18 is analyzed for completeness. When data is missing, the associated image is routed to one of the processors 396, 398 for display on one of the CRTS 150 where an operator keys in the appropriate data on an associated keyboard 152. The image display controllers 410 and 412 have conventional decompression units associated therewith for the purpose of permitting operator viewing of the images from the file means 100. The operators complete the data completion function 148 (FIG. 10) by keying in the appropriate data such as monetary amounts (if necessary) while using the keyboards 152." Owens, et al., Col. 23, lns 47-52.
33. A method as in claim 32 further comprising the steps of:	ANSI in view of Owens, et al. (4,264,808) and Minoli and prior art admissions
polling the remote locations for captured electronic data, captured signature data and captured biometric data with servers at the central locations; and	Applicants' admission "IPC 230 in FIG. 9 may be configured to handle special entries such as those associated with the use of a credit card (as for example, VISA). In this situation the images or entry records 74 (FIG. 3) could be produced at any POA within the banking system 10 and transmitted to the IPC 230 for processing

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	thereat as already explained." Owens, et al., Col. 20, lns 31-37.
comparing the captured signature data and the captured biometric data to stored signature data and stored biometric data respectively for identification verification.	Applicants' admission "With regard to FIG. 8, the various reports (non-image application reports) shown as 214, various reporting data 216, the associated images 218 from the image file means 100, qualified transaction data 220 from the data file means 114 and the associated signatures 222 from a signature file means located at IPC 14 are used to create image reports 224 at the associated IPC 14." Owens, et al., Col. 19, lns 3-9.
34. A method as in claim 32 wherein said transmitting the transaction data step comprises the steps of:	ANSI in view of Owens, et al. (4,264,808) and Minoli
transmitting data within the remote locations;	Items are transmitted from the "Image and Data Processing Application" to the "Originating FII translator" within the originating financial institution. ANSI, p. 202 (FIG. F.1).
transmitting data from each remote location to a corresponding central location; and	"[P]ackaged interchange content is delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the packaged interchange data electronically." ANSI, p. 14; 155. Examples of communication methods include "teleprocessing methods: links, network end point addresses, speed, data transfer protocols, etc." ANSI, p. 172; 199.
transmitting data within the central locations.	Items are transmitted from the "Receiving FII translator" to the "Image and Data Processing Application" within the receiving financial institution. ANSI, p. 203 (FIG. F.2).
35. A method as in claim 34 wherein said transmitting data from each remote location to a corresponding central location step comprises the steps of:	ANSI in view of Owens, et al. (4,264,808) and Minoli
connecting each remote location to a corresponding central location; and	[P]ackaged interchange content is delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the packaged interchange data electronically." ANSI, p. 15-16; 199. Examples of communication methods include "teleprocessing methods: links, network end point addresses, speed, data transfer protocols, etc." ANSI, p. 172; 155. "Communication protocol" is defined as "[a] set of conventions or rules involving predetermined sequences of control signals or

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	characters to establish, or break, connection, or exchange data between discrete computer systems, within networks, (between mainframe and remote terminals), or between a computer and a peripheral." ANSI, p. 142.
connecting each central location to corresponding remote locations.	"[P]ackaged interchange content is delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the packaged interchange data electronically." ANSI, p. 14; 155. Examples of communication methods include "teleprocessing methods: links, network end point addresses, speed, data transfer protocols, etc." ANSI, p. 167; 155. "Communication protocol" is defined as "[a] set of conventions or rules involving predetermined sequences of control signals or characters to establish, or break, connection, or exchange data between discrete computer systems, within networks, (between mainframe and remote terminals), or between a computer and a peripheral." ANSI, p. 216.
36. A method as in claim 29 further comprising the steps of:	ANSI in view of Campbell, et al. (5,373,550)
collecting and sending the electronic or paper transaction data at intermediate locations;	"The system of FIG. 1 comprises a public switched telephone network 10. The network 10 contains at least one check image processing node 12 which provides check clearance services. The node 12 receives images of checks from a sending institution 14 transmitted through the network 10. The node 12 processes the check images and sends them to a receiving institution 16." Campbell, et al., Col. 2, lns 25-33.
managing the collecting and sending of the transaction data; and	"The node controller and router 42 provides interfaces to systems external to the node 12. It is connected to all the other subsystems in the node 12 by way of the local area network 56. The controller 42 provides access to the database 46 and directs check images to appropriate subsystems in the node 12 connected to the local area network 56. Campbell, et al., Col. 5, lns. 14-26.]
transmitting the transaction data within the intermediate location and between the intermediate locations and the remote locations and the central locations.	"A local area network 56 connects the subsystems of the node 12 described above." Campbell, et al., Col. 4, lns. 56-58. The node 12 receives images of checks from a sending institution 14 transmitted through the network 10. The node 12 processes the check images and sends them to a receiving institution 16." Campbell, et al., Col. 2, lns 25-33.
37. A method as in claim 36 wherein said managing the collecting and sending step comprises the steps of:	ANSI in view of Campbell, et al. (5,373,550) and Minoli "The system of FIG. 1 comprises a public switched telephone network 10. The network 10 contains at

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	least one check image processing node 12 which provides check clearance services. The node 12 receives images of checks from a sending institution 14 transmitted through the network 10. The node 12 processes the check images and sends them to a receiving institution 16." Campbell, et al., Col. 2, lns 25-33.
Polling the remote locations for transaction data with servers in the intermediate locations;	"The node 12 contains a frame relay assembler/disassembler 40 which receives frames of digital information representing check images sent by service subscribers to the network 38. The assembler/disassembler 40 also transmits frames of digital information representing check images to the network 38 after those images have been processed by the node 12. A node controller and router 42 controls the routing of check images to their intended destinations, both in the controller and to their ultimate destinations outside the network 38." Campbell, et al., Col. 3, lns 30-39. "The controller 42 may read some data accompanying check images, for example, it may identify that TCP/IP protocol information accompanying those images. That information may instruct the node 12 about the identity of the sending institution and the intended receiving institution." Campbell, et al., Col. 5, lns 23-28. Several severs are suitable for imaging applications. Minoli, p. 33; 250.
storing the transaction data in the intermediate locations in a useful form, said storing maintains the transaction data in a primary memory of a memory hierarchy and performs backup storage of the transaction data into a secondary memory of the memory hierarchy; and	"[T]he processing node 12 receives check images and performs certain processing procedures on those images, including at least temporary storage of the received check images." Campbell, et al., Col. 3, lns. 43-58.
dynamically assigning the servers to receive portions of the transaction data for balancing the transaction data among the servers.	"The node 12 contains a frame relay assembler/ disassembler 40 which receives frames of digital information representing check images sent by service subscribers to the network 38. The assembler/disassembler 40 also transmits frames of digital information representing check images to the network 38 after those images have been processed by the node 12. A node controller and router 42 controls the routing of check images to their intended destinations, both in the controller and to their ultimate destinations outside the network 38." Campbell, et al., Col. 3, lns 30-39. "Bridges connect two or more LANs at the MAC layer. A bridge receiving packets (frames of information will pass the packets to the interconnected LAN based on some forwarding algorithm selected by the manufacturer (explicit route, dynamic address filtering, static address filtering, etc.) Minoli, p. 248-49.
38. The method as in claim 36 wherein said transmitting the transaction data step comprises the steps of:	ANSI in view of Campbell, et al. (5,373,550)
transmitting data within the remote locations;	Items are transmitted from the "Image and Data Processing Application" to the "Originating FII

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	translator" within the originating financial institution. ANSI, p. 202 (FIG. F.1).
transmitting data from each remote location to a corresponding intermediate location;	The node 12 receives images of checks from a sending institution 14 transmitted through the network 10. The node 12 processes the check images and sends them to a receiving institution 16." Campbell, et al., Col. 2, lns 25-33.
transmitting data within the intermediate locations;	"A local area network 56 connects the subsystems of the node 12 described above." Campbell, et al., Col. 4, lns. 56-58.
transmitting data from each intermediate location to corresponding central locations; and	The node 12 receives images of checks from a sending institution 14 transmitted through the network 10. The node 12 processes the check images and sends them to a receiving institution 16." Campbell, et al., Col. 2, lns 25-33.
transmitting data within the central locations.	Items are transmitted from the "Receiving FII translator" to the "Image and Data Processing Application" within the receiving financial institution. ANSI, p. 203 (FIG. F.2).
39. A method as in claim 38 wherein said transmitting data from each remote location to corresponding intermediate locations step comprises the steps of:	ANSI in view of Campbell, et al. (5,373,550)
connecting each remote location to a corresponding intermediate location; and	The node 12 receives images of checks from a sending institution 14 transmitted through the network 10. The node 12 processes the check images and sends them to a receiving institution 16." Campbell, et al., Col. 2, lns 25-33. "[P]ackaged interchange content is delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the packaged interchange data electronically." ANSI, p. 15-16; 199. Examples of communication methods include "teleprocessing methods: links, network end point addresses, speed, data transfer protocols, etc." ANSI, p. 172; 199. "Communication protocol" is defined as "[a] set of conventions or rules involving predetermined sequences of control signals or characters to establish, or break, connection, or exchange data between discrete computer systems, within networks, (between mainframe and remote terminals), or between a computer and a peripheral." ANSI, p. 142.
connecting the intermediate locations to corresponding remote locations.	The node 12 receives images of checks from a sending institution 14 transmitted through the network 10. The node 12 processes the check images and sends them to a receiving institution 16." Campbell, et al., Col. 2, lns 25-33. "[P]ackaged interchange content is delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is

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	through a computer network by transmitting the packaged interchange data electronically." ANSI, p. 15-16; 199. Examples of communication methods include "teleprocessing methods: links, network end point addresses, speed, data transfer protocols, etc." ANSI, p. 172; 199. "Communication protocol" is defined as "[a] set of conventions or rules involving predetermined sequences of control signals or characters to establish, or break, connection, or exchange data between discrete computer systems, within networks, (between mainframe and remote terminals), or between a computer and a peripheral." ANSI, p. 216.
40. A method as in claim 38 wherein said transmitting data from each intermediate location to corresponding central locations comprises the steps of:	ANSI in view of Campbell, et al. (5,373,550)
connecting each intermediate location to an external communication network; and	The node 12 receives images of checks from a sending institution 14 transmitted through the network 10. The node 12 processes the check images and sends them to a receiving institution 16." Campbell, et al., Col. 2, lns 25-33. "[P]ackaged interchange content is delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the packaged interchange data electronically." ANSI, p. 15-16; 199. Examples of communication methods include "teleprocessing methods: links, network end point addresses, speed, data transfer protocols, etc." ANSI, p. 172; 199. "Communication protocol" is defined as "[a] set of conventions or rules involving predetermined sequences of control signals or characters to establish, or break, connection, or exchange data between discrete computer systems, within networks, (between mainframe and remote terminals), or between a computer and a peripheral." ANSI, p. 217.
connecting the corresponding central locations to the communication network.	The node 12 receives images of checks from a sending institution 14 transmitted through the network 10. The node 12 processes the check images and sends them to a receiving institution 16." Campbell, et al., Col. 2, lns 25-33. "[P]ackaged interchange content is delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the packaged interchange data electronically." ANSI, p. 15-16; 199. Examples of communication methods include "teleprocessing methods: links, network end point addresses, speed, data transfer protocols, etc." ANSI, p. 172; 199. "Communication protocol" is defined as "[a] set of conventions or rules involving predetermined sequences of control signals or characters to establish, or break, connection, or exchange data between discrete computer systems, within networks, (between mainframe and remote terminals), or between a computer and a peripheral." ANSI, p. 216.

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41. A method as in claim 40 wherein said transmitting data from each intermediate location to corresponding central locations step further comprises the steps of:	ANSI in view of Campbell, et al. (5,373,550)
packaging the transaction data into frames; and transmitting the frames through the external communication network.	"The node 12 contains a frame relay assembler/disassembler 40 which receives frames of digital information representing check images sent by service subscribers to the network 38. The assembler/disassembler 40 also transmits frames of digital information representing check images to the network 38 after those images have been processed by the node 12. A node controller and router 42 controls the routing of check images to their intended destinations, both in the controller and to their ultimate destinations outside the network 38." Campbell, et al., Col. 3, lns 30-39.
42. A system for central management, storage and report generation of remotely captured paper transactions from checks comprising:	The ANSI X9.46 standard is an electronic data interchange protocol for the exchange of electronic digitized images of financial documents among different financial institutions involved in a payment transaction. ANSI, p. 1. The exchange occurs across diverse computing platforms. Packaged interchange content may be delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the data electronically. ANSI, p. 15-16. "This standard is intended to improve the payments system by supporting the interchange of digitized images of financial documents, specifically checks; facilitate the truncation of the paper at the earliest possible point in the clearing process; and support transmissions from a single transaction to many transaction serving banking payment processing applications." ANSI, p. 1.
one or more remote data access subsystems for capturing [paper transaction data] and	The ANSI X9.46 standard is an electronic data interchange protocol for the exchange of electronic digitized images of financial documents among different financial institutions involved in a payment transaction. ANSI, p. 1. "The institution participating in check image interchange shall capture both the full front and the full back of the item. ANSI, p. 9. The definition of Image Capture is found in the glossary of the standard on p. 220, "The operation of converting a human-readable image on paper to a digital representation stored in memory, or some other electronic, or optical, or electromagnetic, surfaced storage media. This is normally accomplished using some type of scanning device or camera."

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sending	Transaction sets are interchanged. Transaction set contents are different for each functional group that can be interchanged. ANSI, p. 14.
paper transaction data	The function groups include "item views". ANSI, p. 12. "Item Views" include "bundles of views of imaged items, item information for each view and item view data." ANSI, p. 12. "For each item, e.g., check, this standard defines mechanisms for sending and receiving both information about the item (item information) and digitized representations of the item." ANSI, p. 9.
and verifying transaction data from the checks comprising	From Campbell et al: Images are transmitted from the sending bank 14 along with destination identifying data so that the image is routed to the appropriate receiving bank 16. Campbell, et al. Col. 3, lns. 61-63. The destination identifying data is "transaction data" in that it identifies one of the banks involved in the underlying transaction represented by the check. Campbell, et al., Col. 4, lns. 13-21. The destination identifying data may be obtained from the endorsements on the check. Campbell, et al., Col. 4, lns. 5-9. The destination identifying data may be obtained by an operator who views the image of the check and manually enters the destination data, verifying the accuracy of the endorsement from the image. Campbell, et al., Col. 3, lns. 65-67.
at least one imaging subsystem for capturing the checks and	The institution participating in check image interchange shall capture both the full front and the full back of the item. This is accomplished using some type of scanning device or camera. ANSI, p. 9; 217.
at least one data access controller for managing the capturing and sending of the transaction data;	"The data to be interchanged from the originating imaging application are packaged by the FII-translator." ANSI, p. 12. "The translator (FII-translator) function of the originating application produces an interchange object (i.e., a complex data structure) by translating the output of the local imaging handling, data processing, or data storage application into a standardized interchangeable 'edi' structure." ANSI, p. 14; 150-151.
at least one central data processing subsystem for processing, sending, verifying and storing the paper transaction data and the subsystem identification information comprising	"The data to be interchanged from the originating imaging application are packaged by the FII-translator, and sent to the receiving imaging application." ANSI, p. 12. On p. 14, lines 465-466, of the standard states that the "edi" translator function of the receiving application translates the "edi" interchange into the locally understood data structures for subsequent storage or processing of the data by the receiver's application." Subsystem ID: In addition to images, a data element known as "creation computer" which "conveys the system name of the originator's host computer that was used to create and digitize the imaging data" may be transmitted. ANSI, p. 105. The "creation computer" is a item view data element. ANSI, p. 93-94.

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a management subsystem for managing the processing, sending and storing of the of the transaction data; and	"[U]pon receipt of the interchanged data, the FII-translator will parse the incoming data for the receiving imaging application. Then, the receiving imaging application may generate acknowledgements or replies to query requests, and become the originating imaging application for a new image interchange." ANSI, p. 12.
at least one communication network for the transmission of the transaction data	"[P]ackaged interchange content is delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the packaged interchange data electronically." ANSI, p. 16; 199.
within and	Items are transmitted from the "Image and Data Processing Application" to the "Originating FII translator" within the originating financial institution. ANSI, p. 202 (FIG. F.1). Items are transmitted from the "Receiving FII translator" to the "Image and Data Processing Application" within the receiving financial institution. ANSI, p. 203 (FIG. F.2)
between said one or more data access subsystems and said at least one data processing subsystem,	Examples of communication methods include "teleprocessing methods: links, network end point addresses, speed, data transfer protocols, etc." ANSI, p. 172; 199.
with the data access subsystem providing encrypted subsystem identification information and encrypted paper transaction data to the data processing subsystem.	The ANSI standard describes encryption and various security methods. ANSI, p. 55-61. Encryption of specific data elements is taught, "[e]ncryption key name... conveys the name of the key used to encipher the contents of this functional group. The name is mutually known to the security originator and the security recipient, is unique for this relationship, and allows a particular key to be specified." ANSI, p. 57. Thus, data elements are encrypted (enciphered) at the functional group level. This is further supported by the initialization vector showing the length of the data element to be encrypted. ANSI, p. 55-618. As explained, one (1) type of functional group is known as "item views." The check images are item views. The "creation computer" which identifies the computer that creates the image is also an item view data element. ANSI, p. 93; 105. Thus, the originating institution (remote subsystem) provides encryption to both the images and the subsystem identification information.
43. A method for central management, storage and verification of remotely captured paper transactions from checks comprising the steps of:	The ANSI X9.46 standard is an electronic data interchange protocol for the exchange of electronic digitized images of financial documents among different financial institutions involved in a payment transaction. ANSI, p. 1. The exchange occurs across diverse computing platforms. Packaged interchange content may be delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the data electronically. ANSI, p. 15-16. "This standard is intended to improve the payments system by supporting the interchange of digitized images of financial documents, specifically check and similar paper-based instruments; facilitate the truncation of the paper at the earliest possible point in the clearing process; and support transmissions from a single transaction

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	to many transaction serving banking payment processing applications." ANSI, p. 1.
capturing an image of the check at one or more remote locations and sending a captured image of the check;	"The institution participating in check image interchange shall capture both the full front and the full back of the item. ANSI, p. 9. The ANSI X9.46 standard is an electronic data interchange protocol for the exchange of electronic digitized images of financial documents among different financial institutions involved in a payment transaction. ANSI, p. 1.
managing the capturing and sending of the transaction data;	"The data to be interchange from the originating imaging application are packaged by the FII-translator." ANSI, p. 10. "The translator (FII-translator) function of the originating application produces an interchange object (i.e., a complex data structure) by translating the output of the local imaging handling, data processing, or data storage application into a standardized interchangeable 'edi' structure." ANSI, p. 12; 150-151.
collecting, processing, sending and storing the transaction data at a central location;	"The data to be interchanged from the originating imaging application are packaged by the FII-translator, and sent to the receiving imaging application." ANSI, p. 12. "[U]pon receipt of the interchanged data, the FII-translator will parse the incoming data for the receiving imaging application. Then, the receiving imaging application may generate acknowledgements or replies to query requests, and become the originating imaging application for a new image interchange." ANSI, p. 12.
managing the collecting, processing, sending and storing of the transaction data;	"[U]pon receipt of the interchanged data, the FII-translator will parse the incoming data for the receiving imaging application. Then, the receiving imaging application may generate acknowledgements or replies to query requests, and become the originating imaging application for a new image interchange." ANSI, p. 12.
encrypting subsystem identification information and the transaction data;	The ANSI describes encryption and various security methods. ANSI, p. 55-61. Encryption of specific data elements is taught, "[e]ncryption key name... conveys the name of the key used to encipher the contents of this functional group. The name is mutually known to the security originator and the security recipient, is unique for this relationship, and allows a particular key to be specified." ANSI, p. 56. Thus, data elements are encrypted (enciphered) at the functional group level. This is further supported by the initialization vector showing the length of the data element to be encrypted. ANSI, p. 55; 57. As explained, one (1) type of functional group is known as "item views." The check images are item views. The "creation computer" which identifies the computer that creates the image is also an item view data element. ANSI, p. 93-94; 105 Thus, the originating institution (remote subsystem) provides encryption to both the images and the subsystem identification information. Owens et al.teaches the verifying transaction date from checks. "[T]he processor 400 (FIG. 5C) typically performs the data qualification function 154 and the transaction group consolidation function 156 shown in FIG. 10. Essentially, the qualification function 154 performed by processor 400 relates to verifying the data contents to insure completeness and correctness of the developed data and also

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	relates to adding document routing instructions which are used by the storing means 120 to "break out" the documents 18."
verifying the transaction data from the check; and	From Campbell et al: Images are transmitted from the sending bank 14 along with destination identifying data so that the image is routed to the appropriate receiving bank 16. Campbell, et al. Col. 3, lns. 61-63. The destination identifying data is "transaction data" in that it identifies one of the banks involved in the underlying transaction represented by the check. Campbell, et al., Col. 4, lns. 13-21. The destination identifying data may be obtained from the endorsements on the check. Campbell, et al., Col. 4, lns. 5-9. The destination identifying data may be obtained by an operator who views the image of the check and manually enters the destination data, verifying the accuracy of the endorsement from the image. Campbell, et al., Col. 3, lns. 65-67.
transmitting the transaction data and the subsystem identification information within and between the remote location(s) and the central location.	Transaction sets are interchanged. Transaction set contents are different for each functional group that can be interchanged. ANSI, p. 14. The function groups include "item views". ANSI, p. 14. "Item Views" include "bundles of views of imaged items, item information for each view and item view data." ANSI, p. 14. "For each item, e.g., check, this standard defines mechanisms for sending and receiving both information about the item (item information) and digitized representations of the item." ANSI, p. 9. "[P]ackaged interchange content is delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the packaged interchange data electronically." ANSI, p. 15; 199. Items are transmitted from the "Image and Data Processing Application" to the "Originating FII translator" within the originating financial institution. ANSI, p. 202 (FIG. F.1). Items are transmitted from the "Receiving FII translator" to the "Image and Data Processing Application" within the receiving financial institution. ANSI, p. 203 (FIG. F.2). "[P]ackaged interchange content is delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the packaged interchange data electronically." ANSI, p. 15; 199.

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Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified ex parte reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a replly has passed, no submission on behalf of the ex parte reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Order Granting / Denying Request For Ex Parte Reexamination	Control No.	Patent Under Reexamination	
	90/007,830	6032137	
	Examiner	Art Unit	
	Michael O'Neill	3993	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

The request for *ex parte* reexamination filed *25 November 2005* has been considered and a determination has been made. An identification of the claims, the references relied upon, and the rationale supporting the determination are attached.

Attachments: a)☐ PTO-892, b)☒ PTO-1449, c)☐ Other: _____

1. ☒ The request for *ex parte* reexamination is GRANTED.

RESPONSE TIMES ARE SET AS FOLLOWS:

For Patent Owner's Statement (Optional): TWO MONTHS from the mailing date of this communication (37 CFR 1.530 (b)). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).**

For Requester's Reply (optional): TWO MONTHS from the **date of service** of any timely filed Patent Owner's Statement (37 CFR 1.535). **NO EXTENSION OF THIS TIME PERIOD IS PERMITTED.** If Patent Owner does not file a timely statement under 37 CFR 1.530(b), then no reply by requester is permitted.

2. ☐ The request for *ex parte* reexamination is DENIED.

This decision is not appealable (35 U.S.C. 303(c)). Requester may seek review by petition to the Commissioner under 37 CFR 1.181 within ONE MONTH from the mailing date of this communication (37 CFR 1.515(c)). **EXTENSION OF TIME TO FILE SUCH A PETITION UNDER 37 CFR 1.181 ARE AVAILABLE ONLY BY PETITION TO SUSPEND OR WAIVE THE REGULATIONS UNDER 37 CFR 1.183.**

In due course, a refund under 37 CFR 1.26 (c) will be made to requester:

a) ☐ by Treasury check or,

b) ☐ by credit to Deposit Account No. _____, or

c) ☐ by credit to a credit card account, unless otherwise notified (35 U.S.C. 303(c)).

Michael O'Neill
CRU Examiner
Art Unit: 3993

cc:Requester (if third party requester)